

February

Sunday Feb. 1st 1891

4½ hrs in cave

Snow Ball route --- 2 trips

I got up at 5:35 this morning (the coldest I have got up for a long while), and found it the coldest morning we have had this winter so far. Took a one candle trip in base this after noon (2:30) and a 2:00 pm trip in the cave this evening (Both trips were to the Snow Ball Route) I found some decomposed marble that is pretty, and got some blue quartz crystals from rat alley.

Monday February 2nd

5½ hrs in cave

Monument Hall Route 2 trips

Elmer shot 2 rabbit with his rifle this morning when he was hunting up the horse (and he lost last night at Willard). He found the horse in Willard Barn. At 1:30, P.M. Elmer and I started to work on the Tobbogan Slide. At 3:40, P.M. we had a three foot hole drilled and I came to the entrance. I returned at the toboggan slide at 4:10 P.M. We fired the first shot and then drilled 16 inches in another hole we intend to fire tomorrow morning we got out at 7:30 P.M.

Tuesday February 3rd

7 hrs in cave

Monument Hall Route -- 2 trips

Elmer and I got to work on the top of the Tobbogan Slide at 7:00 A.M. We put in one shot, got it worked out and got out of the cave at 12:00 M. Father and I started to work on the Tobbogan Slide at 1:30 P.M. We drilled 1 hole 22 inches deep. The first shot sprung the rock and chambered the bottom of the hole. The second shot in the same hole loosened the top of the Tobbogan Slide so that we worked off one rock that weighed about 1200 pounds. I got three pieces of Minch Cove marble near Snow Ball Room as I come out. We got out at 6:30 P.M. After supper (we were mighty tired) I cut out some pieces of marble and polished one piece

Wednesday February 4th 1891

4 hrs in cave.

(Monument Hall Route 2 trips)

At 8:30 A.M I started in the cave to work on the path between the Comels Back and the Toboggan Slide. I put in one shot in a crack to the left of the path and brought down a rock weighing about 13.00 pounds. It lagged on a point opposite and I put about a quarter of a stick of powder as close to the place it was caught as I could get it, but failed to bring it down. After dinner Father went in the cave and worked the rock loose. That I put two shots in this forenoon. At 7:20 P.M Father and I went in the cave to explore a place near the Devil's Chamber. We found nothing there except pipe stone. We then climbed up the volcanic curies between the Devil's Pot Hook and the Prairie Dog Town. We found several geodes and two cassities, first a celeste nail head crystal, second a crystal point shaped like a dagger.

Thursday Feb. 5th 1891

9 1/2 hrs. in cave.

(Monument Hall Route 2 trips)

Elmer and I started to work on Roes Mirey at 7:00 A.M. We put in one shot with good effect (8 in. hole) and drilled 18 inches of another hole before coming out. We came out of the cave at 11:30 A.M. at 12:30 P.M Elmer and I started back to work on Roes Mirey. We finished the hole we started but the shot did no good, as we drill through into a pocket of some kind. We then drilled a hole in the upper left corner (one go in.) I fired the shot and then came out for supper arriving at 5:30 P.M. Elmer brought out a fine quartz crystal that the shot knocked down.

Friday February 6th 1891

20 minutes in Cave

Monument Hall Route 1 trip

at 7:15 A.M I started for Beaver Valley to work on the Lost Cobin Lake. We found the lake getting richer every inch we dug in it, we got some balsam specimens

I arrived at home at 4:40. P.M. and brought some specimens of Calena ore with me. The ledge gets richer the deeper we dig into it. Elmer went to Hot Springs today and he intend to stop at Morristown tonight. I went in the cove this morning after a shovel to take off to Bear Creek with me. Was in 20 minutes. I found that the shot I and Elmer put in Red Mirey yesterday tore out the corner that we wanted it to.

Saturday Feb. 7th 1891

~~1:55 hrs income~~

(Specimen Route 1 trip)

Soon after I got up this morning the snow began to fall and it is falling yet (9:15 A.M.). Father went up to dig out a spring, that is situated about 50 rods south of Capt. Willard's Spring, but the storm got so furious that he had to come home at 11:00 A.M. At 12:45th I started in the cove with the intention of getting some specimens and went the specimen route at the far end of the second room. I found some nice godes and an extra lustrous quartz crystal. After I got a gode that was covered with water formation I started for the entrance, arriving at 2:45th. I discovered that ledge of Wind Cove Marble, in the specimen Route, that I found in the Monument Hall Route on the 1st inst. It is snowing hard out of doors now and it has snowed 7 inches today since I got up. Good night, Mr. & Mrs. Dan

Sunday, February 8th 1891.

~~2:15 m case~~

(Specimen Route 1 trip)

I found 2 1/2 inches of snow on the door step this morning. It has not snowed any more and is clear out of doors now, but cold. When I went to the barn to feed the cow I found that the snow has drifted badly. After dinner I got enough wood to last tomorrow. At 6:40 P.M. I started in the cove with the intention of following the oval on specimen route but the holes got too small for me. On the way out I found a beautiful calcite crystal with coralline stabs of points all through it but was imbedded in the rock so that I could not get it out whole but got a piece of its apophyllite

Monday February 9th 1891

4:20 in cave

Simpson's Palace Route 1 trip

I went hunting this morning, up the gulch, and shot one rabbit. Had about an hours work to get it. After dinner I went over to Castle Mts. to get some grub. At 6:30 AM Elmer and J. M. Moore arrived from Hot Springs. At 7:40 P.M. Dan. Moore and I started in the cars. We went on the M. B. R Branch of the Simpson's Palace Route. On the North end and East side of Monte Cristo Palace we found crystallized gypsum.

Tuesday. February. 10th /891

3:40 in cave

Bee Hive Route 1 trip

(J. M. Moore and I went hunting this morning but were not successful). at this end of Around Butted Rest, we found a passage leading straight ahead & to the left. Our first discovery was some crystallized gypsum and wind cave marble. We went through a long oven leading nearly due East, & come into a fine triangular shaped room with flat roof & rough floor. We tried to get straight ahead but failed. We then found a passage leading to the right and come unexpectedly in the room that Walter Starling of Hoy Springs Neb., and I found on the 23rd day of January 1891. From there we took a North East course through a long oven that came suddenly to a stop unless we climbed up, which we did with a will, but could not get far. We then concluded to start for the entrance. I loaded up three pieces of Marble (unpolished) to take with me and a few samples of crystallized gypsum. When we arrived at crystal spring J. M. Moore got his sack of tobacco that he forgot on our way in. We arrived at the entrance at 2:40 A.M. & went straight way to bed. At 11:20 A.M. I shot a rabbit, with the shot gun, back of the house, who were going to pull the Wagon Bridge on the road. This evening I made a sneak on a rabbit, near the upper entrance, and shot it. At 7:50 P.M. I started on a pleasure trip to the Bee Hive.

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& was gone an hour. The first pleasure trip I have taken this month. Father went over to J. C. West's this evening and returned about 5 minutes after I got out of the cave. I got out at 8:50 P.M. (that is out of the cave) good night & see you

Wednesday Feb 11th 1891

5:45 in cave	Monument Hall Route	1 trip
Father started to Hot Springs this morning at 7:00 o'clock. At 7:00 a.m. J. M. Moore and I started for Monument Hall. When we got past this side of Devil's Lookout we found a ledge of Marble about 26 inches thick. On our way to Monument Hall we found several places that we threatened to explore on way back. We explored all the places except the last one but found nothing. When we got up to the middle of the longest stretch on the rope, I determined to explore that little hole, that I threatened to explore on the 25 th day of January 1891, when Mat. Moore & Elmer was with me. I left J. M. Moore at the top of the crevice & started down it (in creviced). When I got about half way down I met with a bothersome obstacle in the shape of a rock. After bummering it (the rock), out of the way I called for the rope, (because there was hole below me that I could not see the bottom of) and got it in about a minute. I was surprised to find that the rope would not reach within ten feet of the bottom of the hole, and that was the hardest climbing of the whole business (the bottom of the hole is about level with the bottom of the White Elephante). I found myself in a wonderful place among the most beautiful scenery in the volcanic part of Wind Cave. From here I found the most dangerous climbing that I ever experienced. On the first place I got into the middle of (as far as I could tell), a place that I could see neither bottom nor top. After I got out of that scope I found a room, about the shape of Monument Hall and about twice as long. At the far end of this room I saw some beautiful bracket work that was crystallized. After I left this room about 400 feet behind I came suddenly & unexpectedly to a stop on the way back I saw the main passage that I had missed but had not the time to explore it because I thought J. M. Moore		

was getting anxious about me. I found it a good deal harder climbing to get back than I had at first supposed. When I got up the rope we pulled it out of the place I had just been in, and put it in its old place. When we got back to Devil's Lookout we found that ledge of Marble in the south end end of it. When we got to Snowball Room we tried to get some Fairy's Table crystal but with poor success. J. C. West came on business about sundown or a little after. David J. M. Moore got out of the cove at 2:45 P.M. The longest trip I have taken on the Monument Hall Route since my first trip to Monument Hall on the 26th day of March 1890.

Thursday Feb. 12th (1891)

4:10 in cove

Guides Discovery Route / trip

Father returned from Hot Springs at 1:30 P.M. at 6:00 P.M. J. M. Moore, Elmer and I started on an exploring trip on the Guides Discovery Route. Crossing the right wing of the route we undertook to explore the hole that C. K. Rounds and I found on 26th day of October 1890, and found it hard climbing. When we got to the bottom we found ~~the~~ place that I had been in before a room with mud in the bottom of it. It was the second room (to the left of the main route), from the bottom of the deep hole near the Guides Discovery. From this room we found our way to the first room, and from there we found a way back to the bottom of the deep hole near the Guides Discovery. When we were trying to find a way to get down deeper, I found that same ledge of Marble, that I found in the Monument Hall & Sampson's Palace Routes. On our way out we determined to explore a deep crevice over the South Dressing Room, and came down near the end of the Crev. We got out of the cove at 10:10 P.M. after seeing lots of cove and making a few important discoveries. It is a clear night and quite a bit of snow has thawed today. I took the first trip on the Guides Discovery Route today that I have taken on that route this year. good night.

Friday, February, 13th 1891

2:05 in cave - - - - - Monument Hall Route -- 1 trip
2:41 in cave - - - - - Crystal Route -- 1 trip

At 9:30 this morning J. M. More Elmer and I started in the cove to work on Red Miney, the first thing we done was to examine the place to tell where to put the first shot. We decided load and start the hole that we made a failure of on the 5th day of February 1891. The shot tore out even more rock than we expected of it. I come out of the cave at 11:35 A.M. after dinner I got a good bit of cedar (stalactite) wood. At 7:45 P.M. J. M. more and I started on the Crystal Route with the intention of going to Crystal Palace. We went to Crystal Palace by way of O. K. Round's discovery off 1890, and come back by way of the old Stalactite rooms. I found an odd shaped mineral crystal, near the bottom of the deep hole near the old stalactite rooms. The Crystal has at one time been a calcite prismatic, but since has had a coating of iron, quartz and chert. We arrived at the entrance at 9:30 P.M.

Saturday February 14th 1891

9:00 in cave - - - - - Monument Hall Route -- 2 trips

at 8:00 a.m. Flatfee and I started in the cove to work on Red Miney. We put in the first shot to the left of the miney and about 9 inches deep. It tore out about one ton of rock & broke it up pretty fine. We put the second shot directly behind the place where we put the first shot about 10 inches deep. It had about the same effect as the first shot. The third shot blew out at top (cavitated). I put the fourth shot in a hole (already drilled) at the other end of Red miney & tore out about a ton & a half of rock. We come out for dinner at 12:30 P.M. We went in the cove again at 1:30 P.M. & came out at 6:00 P.M. We put in two shots in the forenoon & two shots in the afternoon. J. M. More went to Hot Springs this morning to see how his brother was and get some candles. He got back this evening before Flatfee and I got out of the cove, & reported all well. He bought out a Winchester rifle with him to kill rabbits with, as there is no other game in the country at this time in the year.

Sunday February 15th 1891

8:03 in cave

(Crystal Route-----1 trip

Father and I packed a box of comisity this morning. At 10:35 A.M I started in the cove to get some mineral crystals. I went to the south end of Crystal Palace Via, the old stalactite rooms and the deep hole near them. I first worked out the pocket of mineral crystals that I discovered on the 13th inst, and then went on the circle that I found the last time Broads folks was in the cove with me. When I got about half way around the circle I found a mineral crystal that was capped with calcite cut crystal. When I got nearly around circle to the left I discovered a young crystal core & worked it partly out, but I did not take any of it out of doors. I came back to the mineral crystal I first worked out & loaded up ready to come out of the cove. When I arrived at the entrance George Mc. Menus, our first neighbor down Wind Canon took me by surprise. After dinner I went home with him, the first time have been down to his place this year, and came back about dark, the weather was cloudy when I got up this morning and has been getting colder ever since. This is the coldest evening we have had this winter, so far. I got out of the cove today at 12:38 P.M.

Monday February 16th 1891

6:22 in cave

(Monument Hall Route-----1 trip

I took a circle around the hills this morning to get a rabbit but failed. At 1:30 P.M J. M. more Elmer and I started in the cove to work the road between Rosemary and Red Hall J. M. more and Elmer put in a shot in the fissure while I worked nearer the Hall with the sledge hammer, fixing the path I arrived at the entrance at 7:52 P.M, and was plenty tired. The weather has been cloudy and the snow has not thrown a bit today (in this part of the country). Good night (M.A.D.)

Tuesday February 17th 1891

2:45 in car

(Crystal Route 1 trip)

Elmer started to Hot Springs this morning & I don't think he will be back to night, on account of bad roads. At 8:45 A.M. J. M. Moore & I started in the cave, with the intention of going to a stalactite room. We took the left wing of the Crystal Route (A. M. Ryan's discovery) & went to the stalactite rooms on the North West end of the big circle ($2\frac{1}{2}$ miles in circumference). We returned by the North West end of Crystal Palace and D. K. Rounds discovery (which will, after this date, be called the Main passage). We arrived at the entrance at 1:30 P.M. at 1:30 P.M. Mrs Willard, Miss Gallop, Oscar Hoff & Father came out of the cave having started in the cave while we were in. This afternoon J. M. Moore took a ride around through the hills and shot two rabbits.

Wednesday February 18th (9t)

2:05 in car

(Specimen Route-----1 trip)

It has been a clear day and thrown a good bit of snow and is at 1:00 P.M. J. M. Moore & I started in the cave to explore our stream of water that William Davis & Mr. Alstaaff tried to lead me to (but failed). Taking the Specimen Route we first began to explore to the right of the deep hole, near the angle of the old part of the route. We started in a small hole, that had one red cord, three binding twines & one cotton wrapping twine in it. We stretched a wrapping twine after us, so we could find our way out without getting lost. The further we went in the larger the hole got, until we got into a fair sized room, about 16 feet \times 40 feet \times 10 feet high. The next passage we had to go through was uncomfortably small as we could hardly squeeze through it, but after we got through we found a fine, (but small) room that was hanging full of brown box & lattice work. From there we climbed up a hole about 30 feet on the angle of 45° degrees and found a room that had small stalactites hanging from the ceiling & stalaces all over the floor of it. We explored around there a while but found no way out, except the way we come in. Returning to the small room that had box & lattice work in it we

went down a hole to the left (as we go in) to the depth of 30 feet or more & found ourselves in the room that M. A. Moore discovered on the 14th day of January 1891. after exploring for about half an hour & finding nothing we returned to the deep hole on the old part of the route different from that which we went, coming back to the string just this side of the hole that we had to squeeze through when we went in. Coming back about 50 feet from the angle in the old part of route I thought it best to explore the small passage leading at a right angle to the left (as we come out). After we had went about 25 feet we came into the largest room that I ever saw before in the Specimen Route, dimensions, about 35 feet X 60 feet X 25 feet high. There were passages leading in every possible direction from it. We took a large passage in the South West corner of the room. The passage kept getting smaller and then opened up into a small stalactite room with dirt floor & red formation in general. From there J. M. Moore found a passage leading to the left & started to explore it for water formation, leaving me to explore another place in a different direction. In about 10 minutes J. M. Moore called me to come to where he was. I started towards him but got into a hole so tight that I had a hard time getting through, but succeeded after tearing a button of my pocket & found myself into a small stalactite room. From there we crawled into a passage to the left, that kept larger until we got into a room about 12 X 12 feet with 3 or 4 passages leading from it in different directions. I climbed up a hole to the left of the room to the height of 35 feet but found nothing except a little water formation and a good deal of hard climbing. When I got back to where I left J. M. Moore, he was not there, but I heard him calling to me to come to him & bring the string, for he had found a place where we would never stop going down when we once got started. When I got to where I could see him, he was about 12 feet below me & I had to jump about half that distance but found a soft lighting place. I found myself into a room that was nearly round and about 50 feet in diameter & had a white roof, brown sides, and red floor.

From there we saw passages leading in every direction. Our first ball of twine ran out on us in this room & while I was tying the second ball of string to the end of the first, J.M. Moore went on an exploring trip by himself, but not out of hearing. He returned in a few minutes and reported that he had found a few small stalactites. We then stretched the string about 100 feet down the avenue to the east & come to a branch in the passage. Leaving the string at the junction of the passages J.M. Moore took the left and I took the right passage promising not to get out of hearing of each other. After I went about 25 feet I told J.M. Moore to stay where he was until I got back. I went a short distance and turned to the right coming unexpectedly on the small stalactites that J.M. Moore found a few minutes before. I then returned to the string & we started to explore for depth. I broke a rock out the way & we went down into a room that we named "Turtle Room". From there we kept on down to the left until we come into a room that we could not see any way out of except the way we come in. We finally found a hole that we could get down by breaking a few rocks out of the way. After I broke the rocks out of the hole J.M. Moore went down about 10 feet and found the hole again filled with loose rock. He broke the rocks out of the way and went down as far as he could get, (about 10 feet), making 20 feet in all, & then returned to me. We started out, but I found a hole to the left (after we got about 15 feet) that led down. Breaking our way for about 4 feet we climbed down about 20 feet and then had to break out a few more stones. After getting the stones out of our way we climbed down about 40 feet more & found the passage blocked up again, (so tight that we could not break it out with the hammer) so we returned to "Turtle Room" & found a passage leading down from there. We went down about 60 feet all told & had to break out 2 holes to get through. We then returned to the room that our first ball of twine ran out in and found a large passage leading to the right (as we go in) but left it for future exploration, as we had but a little candle & not any string. Elmer was at home when we got out of the cave (8.05 P.M.)

Thursday February 19th 1891

4.30 a.m. come [Monument Hall, Cataract, specimen & Smiley Discovery trip]

Father started to Castle City this morning on business at 1.30

P.M. J. M. Moore & I started in the cave with the snare of Wind River (thinking that I and August Henderson give up more than six months ago).

To get to Wind River, we had to go on the Monument Hall Route, as after Post Office & then take the Cataract Route, from the Post Office.

To the right of this end of the third division of the Post Office we climbed up about 60 feet (angling) & come into the Cataract. On the North East end of the Cataract we crawled into a small passage leading to the left & come into a small room (after going about 25 feet). From here we turned to our left about 50 feet & then to our right into the Wind River Chamber. Here we found a large quartz rock and a good many big rocks in the bottom of the room. We explored about 20 minutes without favorable results. I finally found a place that I could get through, by breaking a while with the hammer, & had started on top & bottom of the hole. After breaking through, we come into a room with no regular shape or dimensions, that I could see (probably 30 yards across). From the West end of this room we found a passage leading to the right & I had the pleasure of being the first human being that ever went through it (because I made the first tracks). After we got through this passage we came into the first natural room that I ever saw in the cave, (there not being any fallen rocks), with dimensions about

17 feet in diameter \times 10 feet high. From that we got into a confusion of passages (all natural), leading first to the right and then to the left, about 25 or 30 feet at each angle, & then got into a large room with no regular shape. From there we got into a passage leading to the right & then to the left but kept getting smaller until we were forced to make our progress on our hands & knees. When we got through we come unexpectedly on a cotton wrapping twine. I recognized the twine as the one we stretched yesterday on the Specimen Route & found that we was near "Turtle Room" (about 25 feet above it). So J. M. Moore and I had the honor of, not ably connecting the Cataract & Specimen Routes, but finding another way to get to the Post Office without going past the Bridge Chamber.

We was not satisfied with finding one thing of so much importance, but determined to explore for more. So we came along the string we had found already stretched, until we got even with with the stalactites that J. M. Moore found yesterday & then made our string fast to it and left it. We went through a small hole on our hands & knees that led us into a good sized room (about 30 x 20 feet, irregular), that had quartz rock in the bottom of it; but was nothing like the Wind River rock. From this room we took a small passage leading to the North West, that was nearly lined with calcite crystals. The passage kept get larger until it opened up into a large room with regular dimensions (about 45 x 35 feet). We looked around about 15 minutes before we found the passage that we wanted to take, but I finally found it in the North West corner of the room. The passage was pretty small at first, but there was some wood coming out of it & that inspired us to keep moving because, in Wind Cave, whenever you find a passage that has mud in it, it shows the passage is of some importance. It was a natural passage & we followed it over a hundred feet before we found the big room we expected to find. The room was very irregular & was about 450 feet across in the shortest place. There was a whole network of passages branching in every direction from it & we found that some one had been in the room before we had because there were tracks in the soft floor. We tried to follow the tracks out of the room, but when we got on the solid rock floor again, there was no tracks, so we gave it up after about half an hours search & returned to the large room again. We took another passage this time from the west end of the room & after we followed it a while, we found tracks in it & then found a beaten trail & things began to look natural to me, as though I had been in that place before. To my surprise and delight, we soon come into the Inside Discovery thus making the largest circle that I had yet made in Wind Cave. We arrived at the entrance at 5:45 P.M. after getting a few calcite crystals on our way out.

Friday February 20th 1891
not in the cave

It has been a quiet day with no visitors & a great deal of snow has thawed with the North West winds. Father got home from Custer City and reported all well in that place and at Uteso City. He said Lowell J. Lowell of New York City was at Uteso City on business.

Saturday February 21st 91
not in cave

J. W. Moore & Father started for Hot Springs this morning & Father has not got home yet (7:50 P.M.) I have not been in the cave today, on account of not feeling well, more than anything else. I started on itinized map of the Simpson's Palace Route today & got the most of the Geode Hall Branch finished in good colors. The day has been cold but I guess tomorrow will be warmer, because the wheel ~~is~~ giving us music. After getting home sick after staying out of the cave so long.

Sunday February 22nd
not in cave

The warmest day we have had since the 26th day of January 1891. at 8:20 a.m. George McManus came on a visit & left at 2:00 P.M. at 11:30 a.m. J. H. West came on a visit and left at 1:30 P.M. at 1:40 P.M. Father returned from Hot Springs and reported all well in that place. I got a answer to the note that I sent Melvin A. Moore yesterday but not satisfactory as I wished him to answer it in person. I wrote a letter to grandmother today but will not get a chance to send it until Tuesday as father is going to town Thursday if all is well.

Monday February 23rd 1891

not in the cave

We got a quarter of beef today of Capt. Willard
It rained about an hour this evening but the drops froze
as soon as they struck the ground making everything icy.
Father went over to J. C. West this evening & Elmer
went over to Capt. Willard leaving me alone.

Father returned at 1:05 P.M. & we went to bed shortly
afterwards. The wind has been going in the cave since
midnight with unabated fury (caused by the damp air).

Tuesday February 24th 1891.

~~6:45~~ The wind is still going ~~in~~ ^{out} the cave & sounds
like a heavy water fall. The wind always sounds
like a water fall when it is going in very hard. Have been to
work on the maps today. I have completed Map No. 2
as far as the cave is explored on that Route (Sampson's Palace)
Worked on the Gables Discovery Route on map No. 1 but
did not get much done because I was not in a working mood.
Elmer went down to George Mc Mama's this afternoon to
borrow some powder and shot & got a rabbit on the way home.
I expect company of some kind tomorrow.

5:05, in cave) Sampson's Palace Route 1st

Wednesday February 25th 1891

I worked on map No. 1 about 2 hours this morning.
at 2:30 P.M. Mr. Moore, J. M. Moore & Father arrived
from Hot Springs. After dinner we started in the
Cave. But it was 6:55 P.M. when we got ready.
We started in the cave with the intention of getting a
load of Wind Cave marble and went the Sampson's
Palace route. We went to the marble that was discovered on
the 18th day of February 1891. We got some large
pieces of cord (five) on a way in and gathered it up
upon our return. Elmer, Melvin, John.

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Thursday February 26th 1891

6:35 in cave

Monument Hall Route 1 trip

I just up & down claim ~~metes~~ this forenoon & started in the cave to work between the Post Office & Red Hall. (M.A. Moore & I put in a shot but it did not do much good) at 2:25 this afternoon we returned to the entrance at 6:00 P.M.

M.A. Moore & I returned from the Samson Palace Route at 3:00 a.m.

Friday February 27th 1891

3 hr in cave

Snow Ball Route 1 trip

10 hr in cave

Monument Hall Route 2 trip

13 hours in cave

(3 trips)

At 8:30 a.m. M.A. Moore & I started in the cave to work a shot in Ries Quarry. We drilled the hole about six inches & then went to get some specimens. I took the sledge with me to work out the passage while M.A. Moore got some specimens near Devil's Lookout. We come out to get some dinner at 1:30 p.m. We went in and finished the the hole in Ries Quarry in the afternoon, starting in at 2:00 P.M. and returning at 7:00 P.M. At 2:00 P.M. we started in the cave with the intention of getting some quartz crystals & went on the Snow Ball Route. M.A. Moore discovered a pocket of Fairies Palace Crystals near former discoveries of mine. I discovered three or four blanket ledges of Wind Cave Marble near the bottom of the deep well and got a fine quartz crystal at the right of the path just before we enter Snow Ball Room but about 10 feet below it. The wind started out of the cave this evening, the first time for 5 days.

1/9.45
1/34.30
1/25.41/5

Saturday February 28th

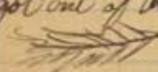
3:15 (in cave)

Monument Hall Route 1 trip

2:45 (in cave)

Snow Ball Route 1 trip

At 9:30 A.M. M.A. Moore & I started in the cave with the intention of getting specimens & cleaning out the loose rock in Red Misery left from yesterday's shot. When we got to Snow Ball Room M.A. Moore stopped to get some specimens while I went on to clean the loose rock in Red Misery after I got the Misery cleared and was working with the ledge near Red Hall, M.A. Moore came and wanted me to help him get a specimen loose. I went with him of course but we failed to get the specimen (quartz crystal) loose. We went out for dinner at 12:45 P.M. at 1:40 P.M. M.A. Moore & I went in the cave with the intention of getting some specimens of some kind. M.A. Moore took the right wing of ~~Sparsesbed~~ Route & I took the left wing. He made a failure of getting his specimen & I made but partial success, (getting an iron stained calcite pyramidal). On our return we went down the Well and got some Wind Cave Marble. We got out of the cave at 4:25 P.M.



Monthly Review ~~1/25/15~~



Principal Discoveries & Improvements

— Monument Hall Route — 17 trips

From middle of Rose I discovered beautiful scenery in the volcanic part of wind cave. Elmer and I blasted off the top of the topogean slide and opened Red Misery. +

— Snow Ball Route — 5 trips

I discovered variegated Marble near the bottom of the well & an iron-stained calcite crystal of great value in left wing. M.A. Moore discovered fine quartz crystals in right wing.

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2 Cataract Route, discovered 1 trip
J. M. Moore & I discovered the connection of Wind
River Chamber with the Specimen & Grider's
Discovery Route. to be known hereafter as Wind River
Circle.

Crystal Route ~~This covers~~ 3 trips

I discovered mineral crystals in the South
end of Crystal Palace & calcite pocket N.E. of
South end of Crystal Palace, also Wind Cave
Marble in Crystal Palace

Sampson's Palace Route ~~This covers~~ 2 trips

J. M. Moore & I discovered a way to get to
the Natural Drums without going through Mound
Bridges Last Resting Place & also discovered
the first Wind Cave ~~marble~~ crystallized gypsum
that was found in the Sampson's Palace Route

Specimen Route ~~This covers~~ 3 trips

J. M. Moore & I discovered "Turtle Room" & the
connection of Specimen Route with the Cataract &
Grider's Discovery Route. I discovered mineral
crystals in the left wing of the Main circle

~~Specimen Route~~ Grider's Discovery Route 1 trip

J. M. Moore Elmer & I discovered the circle in
the lower part of the route. J. M. Moore & I discov-
ered the connection with the Cataract & Specimen Routes
arrange Bee Hive Route 1 trips

~~time of each trip in case~~ Number of trips in cave, 33
~~383 hours~~ hours spent in cave, - 119:45